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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,910	08/06/2001	Don Brunnett	3123-311	8992
32093	7590	03/11/2004	EXAMINER	
HANSRA PATENT SERVICES 4525 GLEN MEADOWS PLACE BELLINGHAM, WA 98226			OLSON, JASON C	
			ART UNIT	PAPER NUMBER
			2651	
DATE MAILED: 03/11/2004				

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/923,910	BRUNNETT ET AL.
Examiner	Art Unit	
Jason C Olson	2651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 13 February 2002.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-37 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-8, 16, 18-27, 35 and 37 is/are rejected.

7) Claim(s) 9-15, 17, 28-34 and 36 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 13 February 2002 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date .
4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
5) Notice of Informal Patent Application (PTO-152)
6) Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 7, 18-21, 26, and 37 are rejected under 35 U.S.C. 102(e) as being anticipated by Obara (6115787).

Regarding claims 1-2 and 18-19, Obara teaches a disk drive coupled to a host computer via an interface, data supplied from the host to the disk drive and data read from the disk drive and outputted to the host are temporarily stored in a cache memory (or buffer) (see col. 5, ln. 3-18). Data to be written is stored in the cache and divided into cache blocks (or host blocks) of 2Kbytes each. The cache blocks are written into the disk drive into track blocks (or disk blocks), where one track block has the capacity of two cache block lengths (see col. 7, ln. 16-39 and col. 8, ln. 45-67). Data to be transferred to the host from the disk drive is read out in track blocks to the cache, then transferred in cache blocks to the host (see col. 14, ln. 1-34).

Regarding claim 7, Obara further discloses wherein the track block is part of a track segment (or disk sector) that is stored in a physical track (or data sector on a disk) (see col. 9, ln. 38-col. 10, ln. 11).

Regarding claims 20-21, 26, and 37: Method claims 20-21, 26, and 37 are drawn to the method of using the corresponding apparatus claimed in claims 1-2, 7, and 18-19. Therefore method claims 20-21, 26, and 37 correspond to apparatus claims 1-2, 7 and 18-19 and are rejected for the same reasons of anticipation as used above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-6, 8, 16, 22-25, 27, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obara and Rothberg et al. (6289484).

Regarding claims 3-6, Obara fails to disclose the format of the track blocks to include an ECC field, pre-data field, and post-data field. However, Rothberg et al. is relied upon to teach an ECC field, a pre-data and a post-data field that corresponds with a data sector (or host block) (see col. 9, ln. 47-col. 10 col. 6 and as depicted by Rothberg et al. in figure 9, items 915a-b, 917a-921a, 921, 917b, and 919b-922b).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the format of the track blocks with the format of the data sector as taught by Rothberg et al. The rationale is as follows: one of ordinary skill in the art would have been motivated to format a data sector as suggested in col. 3, ln. 2-36 of Rothberg et al.

Regarding claims 8 and 16, Obara fails to disclose a safety sector, which stores a copy of the disk sector when a write operation is performed and wherein the safety sector is located on the disk and corresponds with a track. However, Rothberg et al. is further relied upon to teach writing a copy of the block of data (disk sector) and redundancy data to the disk (see col. 2, ln. 15-33).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the format of the disk with a safety sector as taught by Rothberg et al. The rationale is as follows: one of ordinary skill in the art would have been motivated to provide a copy of data to be written as suggested in col. 3, ln. 2-36 of Rothberg et al.

Regarding claims 22-25, 27, and 35: Method claims 22-25, 27, and 35 are drawn to the method of using the corresponding apparatus claimed in claims 3-6, 8, and 16. Therefore method claims 22-25, 27, and 35 correspond to apparatus claims 3-6, 8, and 16 and are rejected for the same reasons of obviousness as used above.

Allowable Subject Matter

Claims 9-15, 17, 28-34, and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kool et al. (5812335) is cited for data transfer without sector pulses in a headerless disk drive. Jesionowski et al. (5715424) is cited for writing data onto rewritable optical media. Horning (5420998) is cited for dual memory disk drive. Rosich et al. (5765193) is cited for controlling a write operation involving data held in a write cache.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason C Olson whose telephone number is 703.305.8325. The examiner can normally be reached on Monday thru Thursday 7:30-5:30; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R Hudspeth can be reached on (703)308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JCO
March 3, 2004

[Signature]
DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600